

## ABSTRACT:

A piston mechanism comprises a crankcase, a crankshaft with three crankpins, a cylinder with diverging pistons, defining working chambers, having inlet and outlet openings, and two connecting members, one of which cooperates with the middle crankpin and the other with the two outer crankpins. In the body of the cylinder there are guide channels provided, in which connecting rods are arranged in alternating sequence, which are attached to one or the other connecting member by their bases, forming two synchronous groups of connecting rods. The guide channels are provided with through-cuts in the working surface of the cylinder with outlets into its cavity so that the faces of the connecting rods of the synchronous groups facing the cavity of the cylinder form movable parts of its working surface. The pistons, are attached by their peripheries to the lateral faces of the connecting rods of one or the other synchronous group sequentially and spaced from each other, forming two movable rigid carcasses inserted in one another and moving in opposite directions.